

EPA-PNL-4919

Phil North/R10/USEPA/US

03/30/2010 02:14 PM

To gwade

cc

bcc Doug.Limpinsel

Subject Nushagak and Kvichak Smolts

Hi Guy,

Carol Ann Woody gave me your contact information. I am an ecologist working on the Pebble Mine for the EPA aquatic resources program (often misnamed the wetlands program). I have been sketching out the issues we need to address in the expected upcoming review. I am trying to get a sense of the range of potential loss of smolt emigration given the mine foot print as well as possible chronic small scale spills and catastrophic failure of a large tailings dam. I am looking down stream at marine ecosystems in Bristol Bay, Bering Sea and the North Pacific.

My initial estimates of smolt numbers were based on an ADFG management rule-of-thumb of 10% egg to smolt survival. A recent presentation by Carol Ann Woody suggested that this produces number that are way too high. She suggested I check with you. If you can spare a moment can you give me a little direction in how to estimate reasonable smolt numbers. Is that possible? I am not looking to make a firm prediction. I want to get a ballpark range so that I can get a sense of the downstream effects from loss of forage fish in marine ecosystems. We are trying to figure out if that might be an issue.

Phil

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